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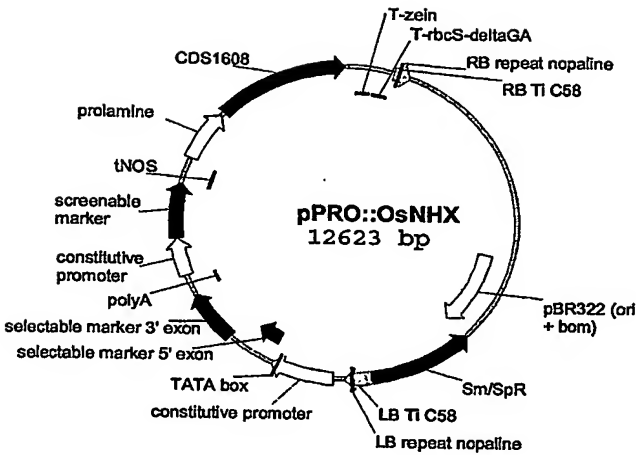


FIGURE 1

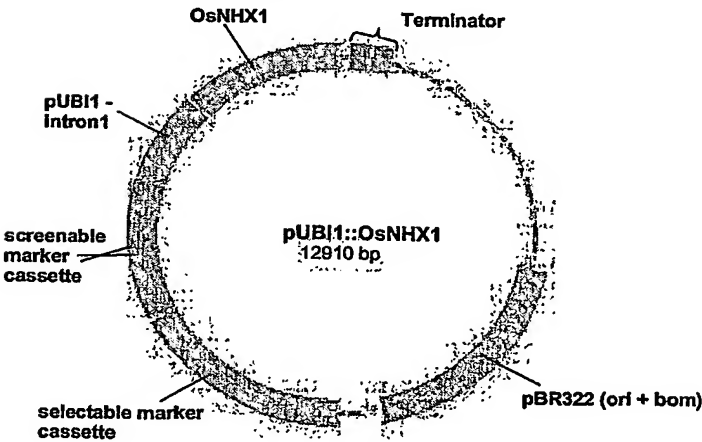


FIGURE 2

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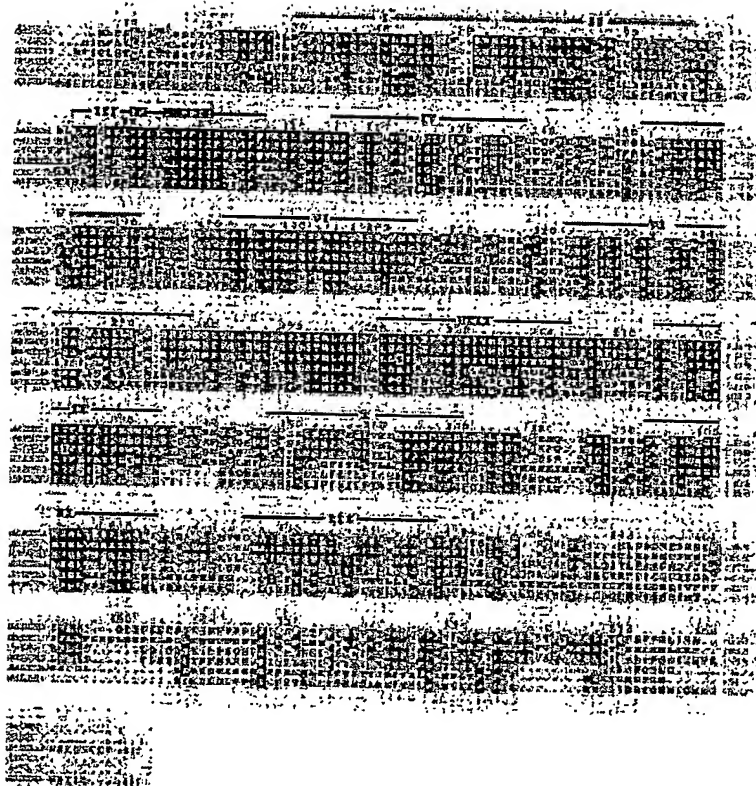


FIGURE 3

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SEQ ID NO 1: coding sequence for *Oryza sativa* NHX1 protein

GAGAAGAGAGTTTGTAGCGAGCTCGCGGAATGCGAAGCCAAACCGAGAGAGGTCTCGA
 TACCAAATCCCGATTTCTCAACCTGAATCCCCCCCCCAGGTTCTCGTTCAATCTGTT
 CGTCTGCGAATCGAATCTTTGTTTTTTTTCTCTAATTTACCGGAATTGTCGAATT
 AGGCATTACCAACGAGCAAGAGGGGAGTGGATTGGTTGGTTAAAGTCCCGCATCTTGC
 GGCGGAAATCTCGCTCTCTCTCTGCGGTGGGTGGCCGGAGAAAGTCGCCGCCGTGAGG
 CATGGGGATGGAGGTGGCGCGCGGCTGGGGCTCTGTACACGACCTCCGACTACG
 CGTCGGTGGTGTCCATCAACCTGTTCTGTCGCGCTGCTCTGCGCCTGCATCGTCTCGGC
 CACCTCCTCGAGGAGAATCGCTGGGTCAATGAGTCCATCACCGCGCTCATCATCGGGCT
 CTGCACCGCGTGGTGATCTTGTCTGATGACCAAAGGGAAGAGCTCGCACTTATTCGTCT
 TCAGTGAGGATCTCTTCTTCATCTACCTCCTCCTCCGATCATCTTCAATGCAGGTTT
 CAGGTAAAGAAAAAGCAATTCTTCCGGAATTTTCATGACGATCACATTATTTGGAGCCGT
 CGGGACAATGATATCCTTTTTCACAATATCTATTGCTGCCATTGCAATATTCAGCAGAA
 TGAACATTGGAACGCTGGATGTAGGAGATTTCTTGCAATTGGAGCCATCTTTCTGCG
 ACAGATTCTGTCGCACATTGCAGGTCTCAATCAGGATGAGACACCTTTTGTACAG
 TCTGGTATTCGGTGAAGGTGTTGTGAACGATGCTACATCAATTGTGCTTTTCAACGCAC
 TACAGAACTTTGATCTTGTCCACATAGATGCGGCTGTGTTCTGAAATTCCTGGGGAAC
 TTCTTTTATTTATTTTGTGAGCACCTTCTTGGAGTATTGCTGGATTGCTCAGTGC
 ATACATAATCAAGAAGCTATACATTGGAAGGCATTCTACTGACCGTGAGGTGCCCCCTA
 TGATGCTCATGGCTTACCTTTTCATATATGCTGGCTGAGTTGCTAGATTGAGCGGCATT
 CTCACCGTATCTTCTGTGGTATTGTAATGTACATTACACTTGGCATAACGTCACAGA
 GAGTTCAAGAGTTACAAACAAGCACGCAATTGCAACTCTGTCTTCATTGCTGAGACTT
 TTCTCTTCTGTATGTTGGGATGGATGCATTGGATATTGAAAAATGGGAGTTTGCCAGT
 GACAGACCTGGCAAATCCATTGGGATAAGCTCAATTTGCTAGGATTGGTTCTGATTGG
 AAGAGCTGCTTTTGTATTCCCGCTGTGTTCTTGTGCAACCTAACAAAGAAGGCACCGA
 ATGAAAAATAACCTGGAGACAGCAAGTTGTAATATGGTGGGCTGGGCTGATGAGAGGA
 GCTGTGTCGATTGCTCTTGTCTTACAATAAGTTTACAAGATCTGGCCATACTCAGCTGCA
 CGGCAATGCAATAATGATCACCAGCACCATCACTGTGCTTTTCTAGCACTATGGTAT
 TTGGGATGATGACAAAGCCATTGATCAGGCTGCTGCTACCGGCTCAGGCCATCCTGTC
 ACCTCTGAGCCTTCATCACCAAAGTCCCTGCATTCTCCTCTCCTGACAAGCATGCAAGG
 TTCTGACCTCGAGAGTACAACCAACATTGTGAGGCCTTCAGCCCTCCGGATGCTCCTCA
 CCAAGCCGACCCCACTGTCCACTACTACTGGCGCAAGTTGACGACGCGCTGATGCGA
 CCGATGTTTGGCGGGCGCGGTTCTGTGCCCTTCTCCCTGGATCACCACCGAGCAGAG
 CCATGGAGGAAGATGAACAGTGCAAGAAATGAGAATGGAATGGTTGATGAGGAGAATA
 CATGTAAATGTGACAGCAAAAGAGAGAAGGCAAGTTTGGGTTTGTAGAGTTTGGCTG
 CTGCTAATGAGTTGTTGATAGTGCCTATATTTCTTCAGAACTTCAGATGGTGCCTCACC
 AGGCCTAAGAGCCAGGAGGACCTTCTGATAATGGTTCCGGATGATTGGTTTGTCTGTC
 AGGATGAACCCCTAGTGAGTGACACAGGGTGATGTGCTCCGACAACTGTAAATTTGTA
 GATTAACAGCCCCATTTGTACCTGTCTACCATCTTAGTTGGCGGGTGTCTTTCTCTAG
 TTGCCACCTGCAATGTAATAATGAAATCTCCGCCAAATAGATTGTGTGTATAATAAT
 TTTGCTTGGTTG

FIGURE 4

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SEQ ID NO 2: *Oryza sativa* NHX1 protein

MGMEVAAARLGALYTTSDYASVVSINLFVALLCACIVLGHLLLEENRWVNESITALIIGL
 CTGVVILLMTKGKSSHLFVSEDLFFIYLLPPIIFNAGFQVKKQPFNFMTITLFGAV
 GTMISFFTISIAAIAIFSRMNIGTLDVGDFLAIGAIFSATDSVCTLQVLNQDETFFLYS
 LVFGEVVDNATSIVLFNALQNFDLVHIDAAVVLKFLGNFFYLFLSSTFLGVFAGLLSA
 YIICKLYIGRHSTDREVALMMLMAYLSYMLAELLDLGILTVFFCGIVMSHYTWHNVTE
 SSRVTTKHAFATLSFIAETFLFLYVGM DALDIEKWEFASDRPGKSIGISSILLGLVLIG
 RAAFVPLSFLSNLTKKAPNEKI TWRQQVVIWAGLMRGAVSIALAYNKFTRSGHTQLH
 GNAIMITSTITVVLFTMVFGMMTKPLIRLLLPASGHPVTSEPPSPKSLHSPLLTSMQG
 SDLESTTNIVRPSSLRMLLT KPTHTVHYIYWRKFDDALMRPMPFGRGFVPFSEFSGPTEQS
 HGG R

SEQ ID NO 3: *Arabidopsis thaliana* Nhxl

ATGTTGGATTCTCTAGTGTGAAACTGCCTTCGTTATCGACATCTGATCACGCTTCTGT
 GGTTCGTTGAATCTCTTTGTGCACTTCTTTGTGCTTGTATTGTTCTTGGTCATCTTT
 TGGAAAGAGAATAGATGGATGAACGAATCCATCACCGCCTTGTGATGGGCTAGGCACT
 GGTGTTACCATTTTGTGATTAGTAAAGGAAAAAGCTCGCATCTTCTCGTCTTTAGTGA
 AGATCTTTTCTCATATATCTTTTGCCACCCATTATATTCAATGCAGGGTTTCAAGTAA
 AAAAGAAGCAGTTTTTCCGCAATTTTGTGACTATTATGCTTTTGGTGCTGTTGGGACT
 ATTATTTCTTGACAAATCATATCTCTAGGTGTAAACACAGTCTTTAAGAAGTTGGACAT
 TGGAACCTTTGACTGGGTGATTATCTTGCTATTGGTGCCATATTGCTGCAACAGATT
 CAGTATGTACACTGCAGGTTCTGAATCAAGACGAGACACCTTTGCTTTACAGTCTTGTA
 TTCGAGAGGGTGTGTGAATGATGCAACGTCACTTGTGGTCTTCAACGCGATTGAGAG
 CTTTGATCTCACTCACCTAAACCAAGAGCTGCTTTTTCATCTTCTTGGAACTTCTTGT
 ATTTGTTTCTCCTAAGTACCTTGTCTTGGTGCTGCAACCGGTCTGATAAGTGCGTATGTT
 ATCAAGAAGCTATACCTTTGGAAGGCACTCAACTGACCGAGAGGTTGCCCTTATGATGCT
 TATGGCGTATCTTTCTTATATGCTTGTGAGCTTTTTCGACTTGAGCGGTATCCTCACTG
 TGTTTTCTGTGGTATTGTGATGTCCCATACACATGGCACAATGTAACGAGAGCTCA
 AGAATAACAACAAGCATACCTTTGCAACTTTGTCAATTTCTTGGGAGACATTTATTTT
 CTTGTATGTTGGAATGGATGCCTTGGACATTGACAAGTGAGATCCGTGAGTGACACAC
 CGGGAACATCGATCGCAGTGAGCTCAATCCTAATGGGTCTGGTCTATGTTGGAAGAGCA
 GCGTTCGTCTTTCCGTTATCGTTTCTATCTAATTTAGCCAAGAAGAATCAAAGCGAGAA
 AATCAACTTTAATGATGAGGTTGTGATTGGTGGTCTGGTCTCATGAGAGGTGCTGTAT
 CTATGGCTCTTGCAACAACAAGTTTACAAGGGCCGGGCACACAGATGTACGCGGGAAT
 GCAATCATGATCACGAGTACGATAACTGTCTGTCTTTTAGCACAGTGGTGTGTTGGTAT
 GCTGACCAAACTCATAGCTACCTATTACCGCACCAGAACGCCACCACGAGCATGT
 TATCTGATGACAACACCCCAAAATCCATACATATCCCTTGTGGACCAAGACTCGTTTC
 ATTGAGCCTTCAGGGAACCAATGTGCTCGGCTCGGCTGACAGTATACGTGGCTTCTTGAC
 ACGGCCCCCTCGAACCGTGCACTTACTACTGGAGACAATTTGATGACTCCTTCATGCGAC
 CCGTCTTTGGAGTCTGGCTTTGTACCTTTGTTCAGGTTCTCCAACCTGAGAGAAAC
 CCTCTGATCTTAGTAAGCT

FIGURE 4 (continued)

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SEQ ID NO 4: *Arabidopsis thaliana* Nhxl protein

MLDSLVSILPSSLSTSDHASVVALNLFVALLCACIVLGHLLERNRMNESITALLIGLGT
 GVTILLISLKGSSHLVFSDELFFIYLLPPIIFNAGFQVKKQFFRNFTIMLFGAVGT
 IISCTIISLGVTOFFKKLDIGTFDLGDYLAIGAIFAATDSVCTLQVLNQDETPLYSLV
 FEGGVVNDATSVVVFNAIQSFDLTHLNHEAAFHLLGNFLYLFLSLTLLGAATGLISAYV
 IKKLYFGRHSTDREVALMMLMAYLSYMLAELFDLSGILTVFFCGIVMSHYTWHNVTESS
 RITTKHTFATLSFLAETFIPLYVGMALDIDKWRVSVDTPGTSIAVSSILMGLVMVGRV
 AFVFPFLSFLSNLAKNQSEKINFNMQVVIWWSGLMRGAVSMALAYNKFTRAGHTDVRGN
 AIMITSTITVCLFSTVVFGLTKPLISYLLPHQNATTSMLSDDNTPKSIHPLLDQDSF
 IEPSGNHNVPDPDSIRGFLTRPRTVHYWRQFDDSFMRPVFGGRGFVFPVPGSPTERN
 PPDLSKA

SEQ ID NO 5: *Medicago sativa* Na⁺/H⁺ antiporter

ACGCGGGGAATCCAACCCATTGTATAACAACAACCTACCGGAGATATATAATATCTCTCT
 CCTCTAAATAGAAATATCGACAGAGTGACTCAACAAGATTATTAGGAGTGATAATCTTCC
 ACGGCAGCTCAAAAACAACAACATCCGATTATCATCATCACGGCTGCTCGAGAGATACT
 TGTGTTGATGAGATCAGAAGGTTCTTAAATGGACAGCTCAGAAACATAAATATCTGGG
 ATTCATTATTACTACTGGACTTTGAAATTTGGAAATTCAGCAATAATCTCAATTTGTTCT
 TTAATCTGCTTTTGAAATTTGTGGAGGTTGGACGACATCATGGCTATTGAAATGCTCT
 CTATTGTTTCAAACTATCAATGTTATCCACTTCCGATCATGCTTCTGTTGTTCTATG
 AACTTGTGTTGGGCACTTCTGTGTGCTTGTATTGTCTTGGTCATCTTCTCGAGGAGAA
 TCGATGGATGAATGAATCCATCACTGCCCTTTTGATTGGTATTGCACTGGTGATGTA
 TTTTGTGTTTGTGTTGGAAAAAGTTGCAATATTCTGTTTTCAGTGAAGATCTTTTC
 TTTATATACCTTCTGCCGCTTATTATATTCAATGCCGGGTTTCAAGTAAAGAAAAAGCA
 GTTTTGTGCAACTTCATGACTATCAATCATTTGGAGCTATTGGCACATTAATATCTT
 GTGTCAATTATAACACGGGTGCTACTTTTGCTTTTAAAGAGGATGGATATTGGGCCACTG
 GAAATCGGCGATTATCTAGCTATTGGAGCAATATTGCGGCAACAGACTCTGTTTGCAC
 ATTGCAGGTGCTAAATCAGGATGAGACACCTTTATTGTATAGTCTGTATTGGGGAAG
 GTGTTGTGAATGATGCTACCTCAGTGGTTCTTTCAATGCAATTCAAAGCTTTGATCTT
 AACCAACTGAACCTTCAATTCGATTGCATTTCTTGGGCACTTCTCTGTAATTGTTGT
 AGCAAGCACACTCCTTGGCGTTGTGACAGGTCTGCTCAGTGCCTATGTTATTAAGAGC
 TGTACATTGGCAGGCACTCCACAGATCGTGAGGTTGCTCTTATGATGCTAATGGCATACT
 CTCTCTATATGCTGGCTGAGTTAACCTATCTGAGTGGCATTCTTACCGTATTCTTTTG
 TGGTATTGTTATGCTCTATTATACTTGGCATAATGTGACGAGAGTTCAAGAATCACTA
 CCAAGCATTCTTTGCTACCTTGTCTTTGTTGCTGAGATCTTTATCTTCTTTATGTT
 GGTATGGATGCCCTGGACATTGAAAAATGGAAGTTGTTAGTGATAGTCTGGAACATC
 TATAGCTGCAAGTTGATATTGTTGGGTCTAATACTTCTTGAAGAGCAGCGTTTGT
 TTCCCTTATCTTCTTATCCAACTTGACTAAAAAATCACAACATCAGAAGATTCTCTTC
 AGACAGCAAGTTATCATTTGGTGGGCTGGTCTTATGAGAGGTGCTGTTTCAATGGCACT
 TGCGTATAATCAGTTCACCATGTGCGGGGCATACTCAACTACGTAGCAATGCAATCATGA
 TAACCAGCACCATCACTGTTGTCCTTTTTCAGCACAGTGGTGTGTTGGTTGCTGACTAAG
 CCACTCATAAGGCTTCTACTACCTCATCTTAAATCACAAGCAGCATGACAACACAGA
 ATCGACTACTCCAAATCATTATGTCCTCACTTCTAGGAGATTCCCGAGATTCTGAAG
 CTGATCTTGAAGGCATGAAATTCACCGACCGAACAGCCTTCTGCTTACTATCAACT

FIGURE 4 (continued)

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CCAACCTCACACTGTTTCATCGATTATGGCGAAAGTTTGATGATTCAATCATGCGTCCCTGT
TTTTGGTGGCAGAGGTTTGTTCCTGTAGAACCTGGCTCACCAAGTGAACGCAATGGTA
ATCAATGGGGTTGAGAAAAGAAGCCATGAAATGTGTAATATGTGTTGTATACTACGTAT
GATTTGTGAAAAGTCATGCAACGTGTGTATAATGTATTTATGTCATAAGAACCTAGTAG
TGAAATTTTCTTTAAAAAAAACCTCGTAGTGAATTTTGTGAGCTGTTGAGTAGC
TAGTATGAGATGGCTTGCCATCTCTCTGTCTATTATGTAACACTACAATATTTTGTAGAT
TCTCTGAGCCATTACATGTTTGTGTATGTGTCCAAAAA

SEQ ID NO 6: *Medicago sativa* Na⁺/H⁺ antiporter protein

MAIEMSSIVSKLSMLSTSDHASVVSMLNFVALLCACIVLGHLEENRWMNESITALLIG
ICTGVVILLFSGGKSSHILVFSEDLFFIYLLPPIIFNAGPQVKKQFFVNFMTITSFGA
IGTLISCVIITTGATFAFKRMDIGLEIGDYLAIGAIFAATDSVCTLQVLNQDETPPLY
SLVFGEGVNDATSVLFLNALQSFDLNLNPSIALHFLGNFLYLFVASTLLGVVTGLLS
AYVIKKLYIGRHSTDREVALMMLMAYLSYMLAELTYLSGILTVFFCGIVMSHYTWHNVT
QSSRITTKHSFATLSFVAEIFIFLYVGMALDIEKWKVSDSPGTSIAASSVLLGLILL
GRAAFVFPPLSFLSNLTKKSQHKISFRQVVIWAGLMRGAVSMALAYNQFTMSGHTOL
RSNAIMITSTITVVLFSVTVFGLLTKPLIRILLPHPKITSSMTTTESTTPKSFIVPLLG
DSRDEADLEGHEIHRPNSLRALLSTPTHTVHRLWRKFDDSFMRPVFGGRGFVPVEFGS
PSERNGNQWG

SEQ ID NO 7: *Suaeda maritima* subsp. *salsa* Na⁺/H⁺ antiporter

TTTCACAAAGATTATTGGACTTCAGAAGTTTGATTTTGTGGAGCTAGAAAGGGTTTCAC
ATACATTGGACATTAATTTACTTGAATATATATATATTTGTTGTGGGTCTTGGATTCGG
GTGCACAAAGAAATAGGTGAACAATGTTGTACAGTTGAGCTCTTTTTTGCAAGTAAG
ATGGACATGGTTTCGACGTCTGATCATGCTTCCGTTGTTTCGATGAATTTGTTGTGGC
ACTGTTACGTGGCTGCATTGTAATGGTCATCTTCTCGAAGAGAATCGCTGGATGAATG
AATCCATTACAGCTTTGCTAATAGTTTATCTACTGGGATTATAATCCTGCTAATTAGT
GGAGGAAAGAGTTGCGCATTTGTTGGTCTTCAGTGAAGATCTTTCTTTATATACCTCCT
TCCACCGATTATATTCATGCGGGGTTTCAGGTGAAAAGAAGCAATTTTCCGCAACT
TCATTACTATTATTTGTTGGAGCCGTTGGTACATTGGTATCATTCAATCATATCT
CTTGGTTCAATAGCTATATTTCAAAAGATGGATATTGGTTCGCTGGAGTTAGGGGATCT
TCTTGCAATTGGTGCAATATTGCTGCAACTGATTGAGTTGCAATTGCAAGTGCTTA
ATCAAGATGAGACTCCACTTCTTATAGTCTCGTGTGTTGGTGAAGGTGTCGTCAATGAT
GCTACATCAGTGGTGTGTTCAATGCAATTCAAAACCTTGACCTCACGCACATTGACCA
CAGAATTGCCCTTCCAATTTGGTGGCAACTTCTATATTTATTTTGTGCAAGCACTCTGC
TTGGAGCAGTGACTGGCTTGCTAAGCGCTTATGTCATCAAAAAGTTGTACTTTGGAAGG
CATTCAACTGACCGTGAGGTAGCCTTAATGATGCTTATGGCTTATCTATCGTACATGCT
TGCTGAACCTCTTCTATCTGAGCGGAATTCTACAGTATCTTCTGTGGGATTGTCAATGT
CCCATTTATACATGGCACAATGTGACGAGAGCTCCAGAGTAACCAAGCATGCTTTT
GCAACACTCTCTTTGTAGCTGAGATCTTCATCTTTCTATATGTTGGTATGGATGCACT
GGATATTGAGAAGTGGAGATTTGTGAGCGATAGTCCTGGAACATCTGTTGCTGTGAGTT
CCATACCTGCTTGGTCTTCACATGGTTGGGCGAGCTGCTTTGTTTTCCTTCGCTTT

FIGURE 4 (continued)

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TTAATGAACCTTGTCCAAGAAATCAAATAGTGAGAAGGTCACCTTCAATCAGCAGATAGT
 CATTGTTGGGCTGGTCTCATGAAAAGTGCTGTCTCCGTGGCACTTGCTTATAATCAGT
 TTTCAAGGT CAGGACACACACAGCTGAGGGGAAATGCAATCATGATTACAAGCACCATA
 ACCGTTGTCTCTTTTCAGTACGATGGTATTTGGGTTGCTGACAAAGCCTCTTATACTCTT
 TATGTTGCCTCAACCGAAACATTTCACTAGTGCAAGCACCGTGTGAGATTGGGGAGTC
 CAAAGTCATTCTCCTTGCTCTTCTTGAAGATAGACAAGATTCTGAAGCTGATTGGGC
 AACGATGATGAAGAAGCCTACCCCGTGGGACTATAGCTCGACCTACTAGTCTTCGTAT
 GCTACTAAATGCACCAACTCACACTGTCCATCATTATTGGCGCAGATTGATGATTATT
 TCATGCGGCCTGTATTGGTGGCCGGGGTTTGTACCTTTTGTCCCAGGTTCAACCCACC
 GAACAGAGCATCACTAATTTTGTACAGAGAACATAAGTTAGCGATAATTGAGGCAGTT
 GGTGCAGAACTAATACTTACAGCCCTACAGGCAATCTACAAAGACAAAAATGCCCT
 TACCCAGAACGAACAGCCCGGTGTTGGTCTCGTGGGCTTGATGTTAAGACTGTGCTG
 TACTTCTGTTAATAGAGAGTAGTTACAGAAACCACCGATTAAACATATCTGTAATTT
 TTACAGCATGGATATTCGATGCATTCTTAACTCTGGCTGTAGCTAGAATACTCTAGCA
 TGTGTTGTAGTTTCAGTCTTACCATTAGGTTTCTCTCTACATAACCTCAATAAGCTGT
 TTAGTGCTTACTGCTTACTTTAGAGCAACTGCAACTGTGAAAATGCTTACGTCAG
 CGGCACCTGTGTAATTTATCATTTTATAATGATGGAGCATGATCATTTGCAATCAAAT
 TTACAATACTGTGATTAAAA

SEQ ID NO 8: *Suaeda maritima* subsp. *salsa* Na⁺/H⁺ antiporter protein

MLSQSSFFASKMDMVSTSDHASVVSMLFVALLRGCIIVIGHLLEENRWMNESITALLI
 GLSTGIIILLISGGKSSHLLVFSDELFFIYLLPPIIFNAGFQVKKQFFRNFIITILFG
 AVGTILVSFIIISLGSIAIFQKMDIGSLELGDLLAIGAIFAATDSVCTLQVLNQDETPLL
 YSLVFGGCVNDATSVVLFNAIQNFDLTHIDHRIAFQFGNPLYLFFASTLLGAVTGILL
 SAYVIKKLYFGRHSTDREVALMMLMAYLSYMLAELFYLSGILTIVFFCGIVMSHYTWENV
 TESSRVTTKHAFATLSFVAEIFIFLYVGM DALDIEKWRFSVSDSPGTSVAVSSILLGLHM
 VGRAAFVFPFAFLMNLSSKSNSEKVTFNQQIVTWAGLMKSAVSVALAYNQFSRSGHTQ
 LRGNAMITSTITVLFSTMVFGLLTKPLILEMFLPQPKHFTSASTVSDLGSPKSFSLPL
 LEDRQDSEADLGNDDEAYPRGTIARPTSLRMLLNAPHTTVHHYWRFFDDYFMRPFVFGG
 RGFVPFVPGSPTEQSIITNFVTENIS

SEQ ID NO 9: *Zea mays* Na⁺/H⁺ antiporter NHX1

ATGGGGCTTGGAGTAGTGGCGGAGCTAGTCCGCCTTGGCGTCCTTTCTCCACCTCAGA
 TCACGCCTCCGTGGTTAGCATCAATCTCTTGTGCGCTTGCTCTGCGCCTGTATCGTCC
 TGGGCCATCTTCTTGAAGAGAATAGGTGGGTGAACGAGTCCACCGCGCTGATTGTCGGG
 CTCCGCACCGGTACCGTCATCCTCATGATTAGCCGGGGGGTGGTTATTCAGTCCTAGT
 CTTCTCCGAGGACCTCTTCTTCTATCTTTTGGCGCGATCATTTTCAATGCAGGGT
 TCCAAGTGAAGAAGAAACAGTTCTTTCGAAACTCATTACTATTACACTGTTTGGTGCA
 GTTGGCACCTTGATCTCTTTACTGTAATATCCCTTGGCGCTCTAGGACTAATATCAAG
 GCTTAATATCGGCGCACTTGAAGTGGGAGACTATCTTGCACTTGGGGCAATATTCTCGG
 CCACAGACTCGGTTTGCACCTTGCAGGTGTTAAGCCAAGATGAGACACCATTCCTTGTAC

FIGURE 4 (continued)

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AGTCTTGATTCGGTGAAGCGTGGTCAACGATGCCACTTCCGTAGTGGTGTTCATGC
 ACTCCAAAACCTTGATATAACTCACATCGATGCGGAGGTGTCTCCATCTATTAGGAA
 ACTTCTTCTACCTCTTCTCTATCAACTGTGTGGGAGTGGCCACAGGACTTATCTCA
 GCGTTAGTGATTAAAAAGCTATACTTTGGACGGCACTCTACTGACAGGGAGGTGGCTCT
 TATGATGCTTATGGCGTATCTCTCTACATGTGGCGGAACCTTTCGCGCTGAGCGGGA
 TCTTGACGGTATTTCTTGGGTGCATTGTTATGAGCCACTATACATGGCACAACGTGACA
 GAGTCCAGCAGAATCACGACTAAGCATGCGTTTGGCACGCTCAGCTTCTAGCCGAAAC
 CTTCTCTTTCTGTACGTGGGTATGGATGCTCTCGACATTGACAAGTGGAGGTCCGTGA
 GTGACACCCACAGTAAGTCTCTGGCCATAAGCTCGATTTTGATGGGACTCGTGATGGTT
 GGCCGGGCTGCCCTTCGTATTCCTCTCTCTCTCTCTCAATTAGCGAAAAAACGGA
 GCACGAAAAAATCAGCTGGAAGCAGCAGGTGGTCAATTGGTGGGCGGGTCTCATGCGAG
 GCGCCGTTTCGATGGCCCTAGCGTACAAGAACTTACCCGCGCAGGGCATACTCAGGTC
 CGCGGGAACCGATCATGATTACCAGCACGATATCGTCGTGTGTGTTTCGACAATGGT
 GTTCGGCCTGTCTACGAAGCCCTTAATTAACCTTGCTAATACCGCACCGTAACGCCACAT
 CGATGTTGAGCGATGACTCAAGCCCAAAGTCTTGCATAGCCCTCTGCTAACCTCTCAA
 CTCGGTAGCGACTTAGAGGAGCCGACCAACATCCCGCGGCCGAGCTCCATAAGAGCGCA
 GTTCTCCATGACTAGGACCGTGCACCGATACTGGCGCAAGTTCGACGACGCGCTTCA
 TGAGGCCCATGTTTCGGAGGCCGCGGTTTCGTACCTTTCGTGCCAGGCAGCCGACCGAG
 CGTAATCCGCGGATCTTTCGAAGGCTTAA

SEQ ID NO 10: *Zea mays* Na⁺/H⁺ antiporter NHX1 protein

MGLGVVAELVRLGVLSSTSDHASVVSINLFVALLCACIVLGHLLLEENRWVNESTALIVG
 LGTGTVILMISRGVVIHVLVFSDELFFFYLLPPIIFNAGFQVKKKQFFRNFITITLFGA
 VGTLSFTVISLGLGLISRLNIGALELGDYLAALGAIIFSATDSVCTLQVLSQDETPFLY
 SLVFGEGVNDATSVVFNALQNFIDITHIDAEVVFHLLGNFFYLFLSTVLGVATGLIS
 ALVIKKLYFGRHSTDREVALMMLMAYLSYMLAELFALSGILTVFFGCIVMSEHYTWHNV
 ESSRITTKHAFATLSFLAETFLFLYVGMDALDIDKWRVSVDTPGKSLAIISSILMGLVMV
 GRAAFVFPPLSFLSNLAKTEHEKISWKQVVIWWAGLMRGAVSMALAYKKFTRAGHTQV
 RGNAMITSTIIVLFSTMVFGLLTKPLINLLIPHRNATSMLSDDSSPKSLHSPLITSQ
 LGSDLLEPTNIPRPSSIRGBFLTMTRTVHRYWRKFDDAFMRPFMFGGRGFVPFVPGSPTE
 RNPPDL SKA

SEQ ID NO 11: *Zea mays* Na⁺/H⁺ antiporter NHX2

ATGGGCCCTTGGTGTGATGCGGAGACGGTCAGGCTCGGAGTCCTTAGCTCGACCTCGGA
 TCATGCCAGCGTTGTCAGTAACAACCTCTTCGTAGCACTTCTTTGCGCCTGTATCGTCC
 TCGGGCATCTCTTGAGGAGAACCGAATGGTTAATGAGTCTATTACAGCACTGCTGGTG
 GGGCTGGGCACTGGGACCGTGATTCTGATGATTAGTGGGGCGTGAGTATCACGTTCT
 CGTCTTTTTCAGAGGACCTGTTCTTTATCTATCTGTTACCTCCGATTATCTTCAATGCCG
 GGTTCAGTAAGAAAAAGCAATCTTCCGCACTTTATAACGATTATTTGTTTGGT
 GCTATTGGGACTCTGATTTCCTTTGTAATAATCTCTCTGGTGCTATGGGGTGTTCAA
 GAAACTTGATTTGGTCCACTCGAGCTTGGGGACTATCTTGCAATTGGTGCTATTTCT
 CGGCAACAGATTCTGTTTGACCTTACAGGTGCTTAACCAGGATGAAACACCCCTACT

FIGURE 4 (continued)

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TACAGTCTCGTATTTCGGCGAGGGCGTTGTTAATGATGCTACCTCAATCGTTGTGTTCAA
 CGCGCTCCAAAACCTTCGACATACCCACATCAATGCCGAGGTGGTATTTACCTCCTTG
 GCAACTTCTGTACCTCTTCTATTGAGCACCGTGCCTGGCGTGGCGACCGGTCTCATC
 TCCGCGCTGGTCATTAGAAGATCTACTTCGGACGCCACTCGACTGATCGGGAAGTGGC
 CTTAATGATGCTGATGGCATATCTAAGCTACATGCTGGCAGAGCTTTTGGCCCTGTCCG
 GAATCCTCACTGTGTTTTTCGGCTGCATCGTTCATGAGCCATTATACGTGGCACAACGTC
 ACGGAGTCTAGCCGAATTACTACGAAGCACGCCCTTTGCCACCCTGTCTTCTCGCTGA
 GACTTTCATATTTCTCTACGTTGGGATGGATGCGCTAGACATTGAGAAGTGGCGGTCCG
 TTTCCGACACCCCGGGCAAATCGATAGCCATATCTCCATACTCATGGGCTTGTCTATG
 CTTGGACGCGCGGCTTTCGTGTTCCGCTAAGTTTCTGTCAAATCTGGCGAAGAAGAA
 TGAGCACGAAAAGATCTCCTGGAAGCAGCAAGTTGTGATCTGGTGGAGCGGTTTGATGA
 GGGGTGCTGTCTCTATGGCCCTAGCTTATAACAAGTTTACCAGAGCCGCCATACGGAG
 GTGAGAGGTAACGAAATCATGATTACTAGCACATTACCGTGTCTATTCTCCACAGT
 GGTGTTCCGTCTCCTGACTAAACCACTGATCAGGCTCCTTATGCCCCACCGCATCTGA
 CCATGCTCTCCGACGACAGCACCCCGAAGTCATTGCACTCACCTTTGCTGACATCCGAG
 CTCGGAAGCTCCATCGAAGAGCCGACGAGATACCCAGCCCTACAAATATTCTGTGGCGA
 ATTCACACTATGACGAGAACCGTGCATAGGTACTGGAGAAAATTTGATGACAAATTCA
 TGCGCCCAATGTTTGGCGGCGAGGGCTTTCGTACCTTCTGTCCTGGTTACCAACGGAG
 AGGAATCCCCACGATCTTTCGAAGCCCTAA

SEQ ID NO 12: *Zea mays* Na⁺/H⁺ antiporter NHX2 protein

MGLGVDAETVRLGVLSSSTSDHASVVSNNFFVALLCACIVLGHLLLENRMVNESITALLV
 GLGTGVILMISRGVSIHVLVFSSEDLFFIYLLPPIIFNAGFQVKKQFFRNFIITILLPG
 AIGTLISFVILSLGAMGLFKLDVGPLELDYLAIGAIFSATDSVCTLQVLNQDETPLL
 YSLVFGEGVNDATSIIVFNALQNFIDITHINAEVVFHLLGNFLYLFLSLTVLGVATGLI
 SALVIKKIYFGRHSTDREVALMMLMAYLSYMLAEFLALSGILTVFPGCIVMSHYTWHNV
 TESSRITTKHAFATLSFLAETFIIFLYVGM DALDIEKWRVSDTPGKSIATSSILMGLVM
 LGRAAFVFLSFLSNLAKKNEHKKISWKQVQVVIWWSGLMRGAVSMALAYNKFTFRAGHTE
 VRGNEIMITSTITVFLFSTVVFGLLTKPLIRLLMPHRHLTMLSDDSTPKSLHSPLLTSQ
 LGSSIIEPTQIPRTNIRGEFTTMTRTVHRYWRKFDDKFMRFMGGRGFVFPVPGSPTE
 RNPDL SKP

SEQ ID NO 13: *Zea mays* Na⁺/H⁺ antiporter NHX3

ATGTCAATAGGACTGACGGCCGAGACCGTGACTAACAAGCTAGCCAGCGCCGAGCACCC
 CCAAGTCTGCCCTAATTCTGTGTTCAATTGCGCTCCTCTGTCTGTGCTGCTGATAGGCC
 ACCTCCTTGAGGAGAACAGATGGGTCAATGAATCAATAACAGCCATTCTCGTGGGCGCT
 GCGACTGGGACCGTCATCCTGCTCATCTCGAAAGGAAAAATCGAGCCACATACTTGTGTT
 CGATGAGGAATTGTTTTTCTATCTACTGCGCCCAATTATTTTCAATGCCGGGTTTC
 AAGTAAAGAAAAAGCAATCTTCCGCACTTTATAACGATTATTTGTTGGTGCTATT
 GGGACTCTGATTTCTTTGTAATAATCTCTCTGGTGCTATGGGGTTGTTCAAGAAACT
 TGATGTTGGTCCACTCGAGCTTGGGGACTATCTGCAATTGGTGCTATTTCTCGGCAA
 CAGATTCTGTTTGCACCTTACAGGTGCTTAACCAGGATGAAACACCCCTACTCTACAGT

FIGURE 4 (continued)

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CTGGTATTCCGGTGAGGGGGTCGTGAACGACGCTACAAGTGTGTGCTGTTTAATGCAGT
 GCAAAAGATCGACTTCGAACACCTTACCGGAGAGGTGGCGCTCCAGGTTTTCGGCAACT
 TCCTCTATCTGTCTCAACCTCAACGGTCTGGGCATAGCCACTGGGCTCATTACCGCC
 TTCGTCTCAAGACACTCTACTTCGGCCGTCTAGTACTACCGTGAGTTGGCCATTAT
 GGTCTGATGGCCTACTGTCTCTCATGCTTGCTGAGTTGTTCACTCTCAGTGGTATCA
 TTAATGTTTCTGCGGCGTGCTCATGTCCCATGTACCTGGCACAATGTTACTGAG
 TCGTCCAGAATTACCTCTGCCATGTGTTGCTATGCTAAGCTTCATTGCCGAAACGTT
 TTTGTTTCTGTACGTGGGGACGGACGCGCTTGACTTCACAAAGTGGAGACGTTCTCGT
 TATCCTTTGGGAAGTCCCTAGGGGTATCCAGCGTGCTCCTGGGGTTGGTTCTAGTCGGT
 CGGGCGGCATTGTTTTCCCCCTCTCGTTCTGAGCAACCTTAGTAAGAAACACCTGG
 GGAAAAAATCAGATCAGGCAGCAGGTTGTAATTTGGTGGGCAGGACTTATGAGGGGCG
 CCGTCAGCATCGCTTTGGCGTTCAACAAATTTACAAGGGCCGGTCACACTCAGGTAAGA
 GGAAACGCAATCATGATCACTAGCACCATCATCGTGGTGCTTTTCTCTACAGTCGTTTT
 CGGCCTCCTCACAAACCGTTAATCAACCTTCTCATACCCCATCGCAATGCAACCTCCA
 TGTGTCTGACGACTCCAGCCCTAAGTCTCTACACAGCCCACTTTTAACCTCCCACTG
 ATAAGCTCAATCGAGGAGCCACGCAATCCGCGGCGGACAAATATACGGGGTGAGTT
 CATGACCATGACGCGAACCGTGATCGCTATTGGCGCAAGTTTGATGACAAGTTCATGA
 GGCCTATGTTTCGGAGGAGGGGTTTTGTCCCGTTTGTCCAGGGTCGCCTACCGAAAGA
 AGCTCACCCGATCTATCCAAGGCATGA

SEQ ID NO 14: *Zea mays* Na⁺/H⁺ antiporter NHX3 protein

MSIGLTAETVTKLASAEHPQVVPNSVFIALLCCLVIGHLLLEKNRWVNESITAILVGA
 ATGTVILLISKGKSSHILVFDEBLFFIYLLPPIIFNAGFQVKKKQFFRNFTIILFGAI
 GTLISFVILISLGAMGLFKKLDVGPLELDYLAIGAIIFSATDSVCTLQVLNQDETPLLYS
 LVFGEVVDATSVVLFNAVQKIDFEHLTGEVALQVFGNFLYLFSTSTVLGIATGLITA
 FVLKTLFYGRHSTTRELAIMVLMAYLSFMLAELFSLSGIITVFFCGVLMSEVTWHNVTE
 SSRITSRHVFAMLSFIAETFLFLYVGTDALDFTKWKTSLSLSEFGKSLGVSSVLLGLVLVG
 RAAFVFLSFLSNLSKHPGEKIIIRQQVVIWAGLMRGAVSIALAFNKFTRAGHTQVR
 GNAIMITSTIIIVLFSSTVVFGLLTKPLINLLIPHRNATSMLEDDSSPKSLHSPLLTSQL
 ISSIEPTQIPRPTNIRGEFMTMTRTVHRYWRKFDDKEMRPMFGRGFVFPVPGSPTER
 SSPDLSKA

SEQ ID NO 15: *Zea mays* Na⁺/H⁺ antiporter NHX4

ATGGGGTATCAGGTCGTGCGCGCAGCTGAAGCTGGCTTCCTCAGCTGACCACGCAAG
 CGTGGTTATCATCAGCTCTTCGTGGCCCTCCTCTGCGCTTGATAGTGTGGGCCATC
 TTCCTGAAGAGAATCGCTGGCTAAACGAATCAATTACAGCATTGATAATCGGGCTCGGA
 ACGGGGTTGTGATTCTATTGATCAGCCGAGGTAAGAACAGCCGCTGCTGTGTCTC
 GGAGGACCTCTTCTCATCTATCTATTGCCGCCCATTTTCAATGCCGGGTTCCAGG
 TGAAGAAGAAACAGTTCTTCGGAATTTTCATGACAATCACTATTCGGTGCTGTGGC
 ACAATGATATCCTTCTTCACAATCTCTCGGCGCAATAGCGACATTTCAGCAGAAATGAG
 CATTGGGACGCTAGATGTGGGGATTTTCTCGCTATTGGAGCTATCTTTCTGCAACGG
 ATTCTGTGTGCACGCTGCAGGTCCTCCATCAGGATGAGACGCCCTTCTGTACAGTCTG

FIGURE 4 (continued)

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GTATTCGGGGAGGGCGTAGTGAAACGATGCCACAAGTGTGTACTCTTCAACGCGATTCA
GAGATCCAGTTCACCCACATAAATGCATGGACAGCTCTCCAGCTGATCGGTAACTTTC
TTTACCTCTTCTCCACGAGTACACTGCTCGGTATCGGGACGGCTTGATCAGACGGTTT
GTCCTGAAGAAGTTGTATTTCCGCGAGCAGCTCCATCCGCGAGGAGCTTGCATCATGAT
CTTAATCGGCTACCTGTACATACGTTCGCCGAGTTGTTTAGTCTGTCCGGGCTCCCTCA
CGGTCTTTTCTGTGGCGTGCTAATGTCTCATGTGCATAGGCATAATGTTTACGGAAGTCC
AGCAGGACAACCGCGTCACTGTGTTCCGCGAGCTCTCGTTTATATCTGAGACTTTTCAT
ATTCTCTGTATGTGGGCACTGAGCGCATCGATTTCGAGAAGTGGAAAGACCTCATCAITTA
GCTTCGTGTGGACCCCTGGGAGTTAGTGGAGTACTATGGGGCTGGTCACTAGGCGAGA
GCTGCTTTTGTCTTTCTCTCTCTCTCTTCTCTCAACCTCGCCAAAGAACACCAAAGTGA
GAAAATTTCTTTTAGGATCGAGGTTGTGATTTGGTGGGCGGGTCTAATGGCGCGCGCGG
TTTCCATGGCCCTGGCGTTGAAACAATTCCTCGAGCGGGCCACACCGAGTACATAGGC
AATGCTATCATGATACTTCAACCATACCGTGGTGTCTGTTCTCTACGATGGTCTTTGG
CATGATTAACAAGGCCATCATGACGGCTGCTTTTGCGCTGCGTCTGGACATCGAGAGAAT
TATCGGAACCGTGTCAACCAAGAGCTTCCATAGTCTCTCTTCTTACCTCGCAACGAGGA
TCTGACCTGGAGTGCAGAACCAATATAGTTCGTCCCTCCTCACTTAGGGGGCTCCTCA
TAAACCAACTCAGCGGTGCACTACTGCGCGGAAGTTCGATGACGCACTTATGAGAC
CGGTGTTCCGGGGACGTGGTTTTCGTGCCATTGTGTTCCCGGAGCCCAACCGAGCGAAAT
CCACCCGATCTGTCCAAAGCTGA

SEQ ID NO 16: *Zea mays* Na⁺/H⁺ antiporter NHX4 protein

MGYQVVAQLKLASSADHASVVIITL FVALLCACIVLGHLL EENRWLNESITALIIGLG
TGVVILLISRGKNSRLTFVSEDLFFIYLLPPIFNAGFQVKKKQFFRNFMITTLFGAVG
TIMSFTTISLGAIAITLFRMSIGTLVDGDFLAIGATFSATDSVCTQLVLHQDETPFLYSL
VFEGEVNDATSVVLFNAVKQIKQTHINAWTALQIGNFLVLFSTLLIGTGLITAT
VLKKLVFGRHSTTRELALMILMAYLSYMLAELFSLGSLTLVFFCGVLMSHVTHWNVTES
RRTTSRHVFATLSFISETFIFLYGMDALDEPKWKTSSLSFGGTGLVSGVLMLVMLGR
AAFVPLFSLNLAKKHQSEKISFRM QVVIHWAGLMRGVSMALALNKFTRSGHTQLHG
NAIMITSTITVLFSTMVFGMITKPLIRLLLPASGHPRELSESPKSFHSEPLTSSQGS
SDELESTTNIVRPSSRLRGLLTKPTHTVHYWRKFD DALMRPVFGGRGFVFPVFGSPTERN
PDLLSKA

SEQ ID NO 17: *Hordeum vulgare* HvNHX1

AACGGAACCTTCTCCAGATACCCCGCCCGCGCGAAAGAATAGAGGAGAATCCCGACCT
CCCGCCCGCGCGGCTGCGCATGCCCCCCTCTTCTCCCTCCTCGCTCCCCACCCC
GGGTTTCCCGTGCCATTCTTCTCCCTCCCCACCCGCGCCCGGACGAAGCAGCGCGG
AGACGGGCGCAGAGGAGGAGAGCTCGTGTTCTTCGTCTCCCGTCGATTGCTCTC
CGGATTAGCGCCGCGCGCGGTTCCCGAGGGCTCGCTCGGGTTGATCGATCTGATTG
AAAAAGCCCGGCTCTTCTCCCGAGCGCGCGCTCGCTCGCGGAGCTAGCTGTGTCTC
GTTCCGGCCGGCTCAAGGAAGAGTAAACGGCGGGATGGCGTTCGAAGTGGTGGCGG
CGCAGTTGGCGCGGCTAGCGACGCGCTGGCCACTCGGACCAAGCTCTCGTGCTCC
ATCAACCTCTTCTGTCGCGCTGCTCTGCGCTCGCATCGTCTCGGCCACCTCCGTAGGA

FIGURE 4 (continued)

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GAACCGCTGGCTCAACGAGTCCATCACCGCCCTCATCATCGGGCTGTGCACCGGCGTGG
TGATCCTGATGACCACCAAGGGGAAGAGCTCGCACGTGCTCGTCTTCAGCGAGGACCTC
TTCTTCATATACCTCCTCCCTCCCATCATCTTCAACGCCGGTTTCCAGGTGAAGAAGAA
GCAGTTCTTCGGGAATTTCATGACAATCACATTATTGGCGCTGTCCGGACGATGATTT
CATTCTTCAATCTCTCTGCTGCCATTGCGATATTAGCAAGATGAACATTGGGACA
CTGGATGTATCAGATTTCTCGCAATTGGAGCCATCTTTCCGCGACAGATTCTGTCTG
CACTTTACAGGTTCTCAATCAGGACGAGACGCCCTTTCTGTACAGTCTAGTTTTCGGGG
AAGGTGTTGTGAACGATGCCACATCAGTCGTGCTTTTCAACGCCGCTCCAGAACTTCGAT
CCTAACCAATCGATGCAATCGTCATTCTGAAGTTCTTGGGAAACTTCTGCTACTTATT
CGTGTCAAGCACCTTCTTGGAGTATTTCTGGATTGCTCAGTGCTACATAATCAAGA
AGTTATACATAGGAAGGCATTCTACTGACCGTGAGGTGCGCTTATGATGCTCATGGCC
TACCTCTCATATATGCTAGCTGAGCTGCTTGATTGAGTGGCATCCTCACCGTGTCTT
CTGTGGTATTGTGATGTCGCATTATACTTGGCATAATGTGACAGAGAGCTCAAGAGTTA
CAACAAAGCATGCTTTTGAACCTTGTCTTCATTGCTGAGACCTTCTCTTCTTTAT
GTTGGGATGGATGCACTGGATATCGAGAAGTGGAAATTTGCTAGTGACAGCCCTGGCAA
ATCCATCGGAATAAGCTCAATTTTGCTAGGATTAGTTCTGTTTGGAAAGAGCTGCTTTTG
TCTTCCCGCTTTCATTCTTATCCAACCTGACAAAGAAGACGGAGCTCGAAAAATAAGC
TGGAGGCAGCAAATCGTAATATGTTGGGCTGGGCTGATGAGAGGAGCTGTGTGCTCGC
TCTTGCTTACAATAAGTTTACAAGATCTGGCCACACACAGCTACACGGCAACGCGATAA
TGATCACCAGCACCATCACTGTCTGTTCTGTTAGCACTATGCTGTTTGGCATATTGACA
AAGCCTCTGATCCGGTTCCTGCTGCCCGCGTCGAGCAATGGCGACCCCTCGGAGCCCTC
GTCACCGAAGTCCCTGCACTCTCCTCTCCTCACAAGCATGCTAGGCTCGGACATGGAGG
CGCCTCTCCCATCGTCAGGCCCTCCAGCCTCCGGATGCTCATCACCAAGCCGACCCAC
ACCATCCACTACTACTGGCGCAAGTTCGACGACGCGCTGATGCGTCTATGTTCCGCGG
GCGCGGGTTTCTGCTTACTTCCCTGGATCACCCACCGATCCAAACGTAATCGTGGCAT
GAACGTTGTGGAGAGAAGAGAAAAGCCATTACAGCTTCAGGAGACACTCTGAAGTGTG
TAAGTGAAGAGAAGGAGGTGCTACAGCTTCGGAAGAAGGCGAAGTCTCCATTACTATT
ATAGTGTGTTGGCTGACTCGGAGGGCCGAAGAAGGCGCCCTCTGACGATGGTTTCAATG
AACGTTGTTGTCGGCACCAACAGGAAGATGAACCTAGTAACGGTGATGCGAGTACCA
TCGCCCTTATCGGTTACGACAAGCCTGTACATTTTGTATGTAGATTAAACAAGCCAATTG
TACCTATGAGATGAGATCTCCTCTGGCAGGCAGGCAGGCCATTTCCTTGCTCCTTGGC
TAGGAGTCTCTGGCCTCCTGCATATCTACCAAGTGTATTAATCTCCTCCCCACTTTC
TAGTGGATTGGTGTAAATGGTGTACTTTACCAAGTTGTGTGAGATGAGTGATGATCTT
GTGGCCTGGTTGCTACAAAGAACTCATCTCAAAGTTATCTATCTATTTTCTATATTGAA
TTGAAGTGAAGTTGTGCTTTGAACCA

SEQ ID NO 18: *Hordeum vulgare* HvNHX1 protein

MAFEVVAQLARLSDALATSDHASVVSINLFVALLCACIVLGHLLBENRWLNESITALI
IGLCTGVVILMTTKGKSSHVLVFSDELFFIYLLPPIIFNAGFQVKKKQFFRNFMITLTF
GAVGTMISFFTISLAAIAIFSKMNIGTLDVSDFLAIGAI FSATDSVCTLQVLNQDETFP
LYSLVFGEVVDATSVVLFNALQNFDPNQIDAIVILKFLGNFCYLFVSSFTFLGVFSGL
LSAYIIKKLYIGRHSTDREVALMMLMAYLSYMLAELLDLSGILTTFVFCGIVMSHYTWN

FIGURE 4 (continued)

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VTSSRVTTKHAFATLSFIAETFLFLYVGM DALDIEKWKFPASDSPGKXSIGISSILLGLV
 LVGRAAFVPLSFLSNLTKTELEKISWRQQIVWWAGLMRGAVSIALAYNKFTRSGHT
 QLHGNAIMITSTITVVLFSITMLFGILTKPLIRFLLPASSNGDPSEPSSPKSLHSPLLTS
 MLGSDMEAPLPVIRPSSLRMLITKPTHTIHYWRKFDDALMRPMFGGRGFVPYSPGSP
 TDPNVIVA

SEQ ID NO 19: *Triticum aestivum* NHX2

ATGGGGTACCAAGTGGTGGCGGCGCAGCTGGCGCGGCTGAGCGGCGCGCTGGGCACCTC
 GGACCACGCCTCCGTGGTCTCCATCACCTCTTCGTGCGGCTGCTCTGCGCCTGCATCG
 TCCTCGGCCACCTGCTCGAGGAGAACCCTGGCTCAACGAGTCCATCACCGCCCTCATC
 ATCGGGCTGTGCACCGGCGTGGTGATCCTGATGACCACCAAGGGGAAGAGCTCGCACGT
 GCTCGTCTTCAGCGAGGACCTCTTCTTCATCTACCTCCTGCCTCCCATCATCTCAACG
 CCGGTTTCCAGGTGAAGAAGAAGCAGTTCTTCCGGAATTTATGGCAATCACACTATTT
 GGTGCCGTTGGGACGATGATGTCGTTTTTCACAATATCTCTTGCTGCCATTGCGATATT
 CAGCAGGATGAACATTGGGACACTGGATGTATCAGATTTCTTTCGAATGGAGCTATCT
 TTTCCGCGACAGATTCTGTCTGCACTCTACAGGTTCTCAATCAGGACGAGACGCCCTTT
 TTGTACAGTCTAGTGTTCGGGGAAGGTGTTGTGAACGATGCCACATCGGTCTGCTTTT
 CAACGCGCTCCAGAACTTCGATCCTAACAGATCGACGCGATCGTCATTTCTTAAGTTCT
 TGGGGAACCTTCTGCTACTTATTCGTGTCAAGCACCTTCCTTGGAGTGTTTACTGGATTG
 CTAGTGCTATACGTATCAAGAAGTTATACATAGGAAGGCATTTACTGACCGTGAGGT
 CGCATTGTGATGCTCATGGCCCTACCTCTCATATATGCTAGCTGAGCTGCTAGATTGA
 GTGGTATCCTCACTGTATTTCTTCTGTGTTTGTGATGTCACATTACACCTGGCACAAC
 GTGACAGAGAGCTCAAGAGTTACAACAAAGCATGCATTTGCAACCTTGTCTTCATCGC
 TGAGACTTTTCTCTCTTTATGTTGGGATGGATGCACTGGATATTGAGAAGTGGAAT
 TTGCTAGTGACAGCCCCGGCAAATCCATTGGAATAAGCTCAATTTTGTCTGGGTTGGTT
 CTGGTTGGAAGAGCTGCTTTCTGTTCTTCCGCTCTCGTTCTTATCCAACCTGACAAAGAA
 GACGGAGCTCGAAAAATAAGCTGGAGGCGCAAATCGTAATATGGTGGGCTGGGCTGA
 TGAGAGGAGCTGTGTCGATCGCTCTTGCTTACAATAAGTTTACAAGATCTGGTCACACA
 CAGCTGCACGGCAACGCGATAATGATCACCAGCACCATCACTGTCGTTCTGTTTAGCAC
 TATGTTGTTTGGCATTTTGACAAAGCCTCTGATCCGTTTCTACTGCCCGCGTCGAGCA
 ATGGCGCGCCCTCAGATCCCGCGTCACCGAAGTCCCTGCACTCTCTCTCTCACAAGC
 CAGCTAGGCTCGGACCTGGAGGCGCCTCTCCCATCGTGAGGCCCTCAGCCTCCGGAT
 GCTCATCACCAAGCCGACCCACCATCCACTACTACTGGCGCAAGTTTGACGACGCGC
 TGATGCGCCCGATGTTTCGGAGGGCGCGGTTCTGTCCTACTCCCCAGGATCAACCAAC
 GATCCGAACGTACTCGTGAATGAACGTCGCGAAGAAGCAACGGAGAAGCCATTACAGC
 TTCAGGAGACACTCTGAACGTAAACAGGAAGGGAAGGAAGTGTACAGCTTCAGAAGAA
 CGCGAAGTCTCCGGTAATATTATAGCGTTTGGCAGACTCGGAAGGCTGAAGAAGGCGGC
 CCTCCGATGATGGTTTCAAGTGAACGGTTGGTTGCGGCACCGACAGGAAGATGAACCTTA
 GTAACGGTGTGCGAGTATCATCATCGCTTATCGGTTACGACAAAGCCTGTACAGTTT
 TGTATGTAGATTAAACAGCCAATTGTATCTATGAGATCTCCGTTGGCAGGCGGCTC
 TGACCTCCTGCATCTGCGACGACCGCGGCTGGCCAAGGCGGGTGGGGCGGTCGTAC
 GCGCGCTTCCGCGCGGGTGATGTTCCAAGCGAGGGCGGGCTCAAGAGCTTCGAGCA
 CCCCATGAACCGCTTAAGGCGCTCCCAGGCTGGACAGCGAGGGCGTCATGTGCGGCG

FIGURE 4 (continued)

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CCAACCTCAAGGTCGACGCCTTCACCAAGATCAACTCCATGCCCGCGTCGGCAGCGCC
 ACCAACTGGGCGCGCCCTGGGACGACGCCCATCTGATCCTCGCGCGCGCGCGTT
 GCTCTCCGTCGTGGCCTCGTCGGGCTTGGGCTTATGCACTTTACTTGTTTTCCTTCC
 TTGGCAATGTACATTCTGATCTGATCTGATCTGAGCCGTGTGTGGCGTGGCGCGCTG
 GCACGTACGGCTGTTTGCTTGTACGATGGAGGAATAAGACTTTGCTTCCAGTCCAAAA
 AAA

SEQ ID NO 20: *Triticum aestivum* NHX2 protein

MGYQVVAQLARLSGALGTSDHASVVSITLFWALLCACIVLGHLLLEENRWLNESITALI
 IGLCTGVVILMTTKGKSSHVLVPSDELFFIYLLPPIIFNAGFQVKKQFFRNFMAITLF
 GAVGTMMSFFTISLAAIAIFSRMNIQTLDSDFLAIGAIFSATDSVCTLQVLNQDETPF
 LYSLVFEGGVNDATSVVLFNALQNFDPNQIDAIVILKFLGNFCYLFVSSFTFLGVFTGL
 LSAYVIKKLYIGRHSTDREVALVLMAYLSYMLAELLDLGILTVFFCGIVMSHVTWHN
 VTSSRVTTKHAFATLSFIAETFLFLYVGMDALDIEKWKFSADSPGKSIGISSILLGLV
 LVGRAAFVPLSFLSNLTKKTELEKISWRQQIIVWAGLMRGAVSIALAYNKFTRSGHT
 QLHGNAIMITSTITVVLFSMTLFGILTKPLIRFLFPASSNGAASDPASPKSLHSPLLTS
 QLGSDLKAPLPIVRPSSLRMLITKPTHTIHYWRKFDDALMRPMPGGRGFVPYSPGSPT
 DPNVLVE

SEQ ID NO 21: *Oryza sativa* NHX2

GGTGGCCATCTCGCTTGAATCTGCAGGGTGAGCTGAGGAGGATCCACTGAGGTGGCGGC
 GGTGAGATGGGGCTGGATTGGGAGCTCTCGTTCTCAATCCGGCGGGCTGTTGGTGT
 CGGACTACGACTCGATCGTCGCGATCAACATCTTCGTGGCGCTGCTGTGCAGCTGCATT
 GTGATCGGGCACCTGCTGGAAGGAACCGGTGGGTCAATGAATCCATCACCGCGCTTGT
 CATGGGGCTGATCACTGGAGGTGTGATTCTGCTCGTCAGTGGTGGGAAGAACTCGCACA
 TTCTTGTTGTTCAGTGAGGACCTCTCTTCATTATTTGCTTCCACCGATCATCTTTAAT
 GCTGGGTTTCAAGTAAAGAAAAACAATTCTTCCGCAATTTATGACAATTTATTTATT
 TGGTGTCTGTTGGGACATTGATATCCTTTGTGATAATCTCTCTAGGTGCCATGACATTGT
 TCAAAAACTTGATGTTGGTCCACTCCAGCTTGGGGACTATCTTGCAATTGGGGCTATC
 TTCTCAGCAACAGATTCTGTTTGCACCTTACAGGTGCTTAACCAAGACGAAACACCCCT
 ACTCTATAGTCTGGTTTTTGGTGAAGGGTTGTCAATGATGCTACATCTGTTGTGCTCT
 TTAATGCAATTGAAGACATTGATATTGCTAATTTGATAGCCTTGTCTACTAGCGTTC
 ATAGGAAATTTCTCTACCTATTCTTCACAGTACCTTCTTGGAGTAGTTGCTGGGTT
 GCTTAGTGCTATATTATTAAGAACTATGTTTGGCCAGACACTCAACTGACAGAGAAG
 TTGCTATCATGATACTCATGGCGTACCTTTCATATATGCTGTGATGCTGCTAGATCTG
 AGTGGCATTTCTCACTGTGTTCTTCTCTGGAATAGTAATGTACATTACACTTGGCATAA
 TGTGACAGAAAGCTCTAGGATTACTACCAAGCACACTTTTGCTACTTTATCTTTTCATTG
 CTGAAATTTTCTATTTCTCTATGTTGGGATGGATGCACTGGACATTGAAAAATGGAAA
 TTAGCTAGCAGCAGCTCTAAAAAACCAATTGCTTTAAGTGCACTATATTTGGGCTTGGT
 TATGGTTGGAAGAGCAGCATTGTTATTCCTTTGTCTTTCTTATCCAATCTAAGTAAAA
 AAGAGACACGCCCAAGATCTCCTTCAAGCAGCAAGTAATCATATGGTGGGCGGTCTC
 ATGAGAGGAGCAGTATCAATAGCACTTGCTTATCAAGTTACCGCATCTGGTCATAC

FIGURE 4 (continued)

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TGAATTGCGAATCAATGCTATCATGATCACCAGCACAGTCATTGTTGTTCTGTTTCAGCA
 CAATGGTTTTTGGTTTTTTTACCAAGCCTCTCCTCAATCTCCTCATCCCACCAAGGCCT
 GACATAGCAGCTGATCTCTCAAGCCAGTCAATCATAGACCCACTTCTTGGGAAGCCTGCT
 GGGGTCTGACTTCGATGTAGGCCAGCCCTCCCCTCAGAACAACCTTCAGCTTCTTCTCA
 CCATTGAGACTCGCTCCGTTTCATCGCGTGTGGCGCAAGTTTGATGATAGATTTCATGCGC
 CCGATGTTCCGGGGCCGAGGCTTCGTTCCCTTCGTCCTGTTCCGCAAGTGGAGCGGAG
 CATCCATGGATCTCAACTGGGCACTGTGACTGAGGCTGAACATAGCTGAGTTTGAGGTT
 CAGAAGGTGCAAGCA

SEQ ID NO 22: *Oryza sativa* NHX2 protein

MGLDLGALVLKSGGLLVSDYDSIVAINIFVALLCSCIVIGHLLLEGNRWVNESITALVMG
 LITGGVILLVSGGKNSHILVFSEDLFFIYLLPPIIFNAGFQVKKQFFRNFTIILFGA
 VGTLSIFVIIISLGAMTLFKKLDVGPLQLGDLAIGAIFSATDSVCTLQVLNQDETPLY
 SLVFGGEGVNDATSVVLFNAIEDIDIANFDSLVLLEAFIGNFLYLFFSTLLGVVAGLLS
 AYIIKKLCFARHSTDREVAIMILMAYLSYMLSLDLGILTVFFSGIVMSHYTWHNV
 ESSRITTKHTFATLSFIAEIFLFLVGM DALDIEKWKLAS SSPKPIALSATILGLVMV
 GRAAFVFPLSFLSNLSKKETRPKISFKQQVIIWAGLMRGAVSIALAYHKFTASGHTL
 RINAIMITSTVIVVLFSTMVFGFFTKPLNLLIPRPDIAADLSSQSIIIDPLLGSLLGS
 DFDVGQFSPQNNLQLLLTIQTRSVHRVWRKFD DRFMRPMPGGRGFVPFVPGSPVERSIH
 GSQLGTVTTEAHS

SEQ ID NO 23: *Saccharomyces cerevisiae*

ATGCTATCCAAGGTATTGCTGAATATAGCTTTCAAGGTGCTGTTAACCACCGCCAAGAG
 AGCAGTTGATCCTGACGATGATGATGAACCTTCTACCTTCCCGGATCTCCCGGGTAGCG
 ATGACCTTATGACGGTGATCCTGATGTAGACTTAAACCTGTTACAGAAGAAATGTTCT
 TCTTCATGGGCATTGTTTATTATGTTGCTCCTATTGATCTCTGCATTGTGGTCTAGTTA
 CTATTTAACTCAGAAACGAATTAGGGCAGTGCATGAACTGTGCTTTCTATTTTATG
 GTATGGTTATTGGCTTGATAATAAGGATGTCCCGGGCATTATATTCAAGATACGGTT
 ACTTTTAATTCATCTACTTTTTTAATGTCTATGCGCCAATTATTTTAAATAGTGG
 GTACGAGTTGAATCAAGTGAACCTTTTCAATAATATGTTATCTATCTTAATTTTGGCCA
 TACCGGGCACCTTCATATCTGCTGTGGTTATTGGAATCATATTGTATATCTGGACCTTT
 TTAGGACTAGAGATTATGACATTTCATTGCGAGATGCAATGTCTGTTGGTGCTACATT
 ATCTGCTACCGACCTGTTACAATTCTTTCAATTTCAATGCGTATAAAGTGGATCCTA
 AGCTATATACCATCATTTTGGAGAATCACTGTTAAATGATGCCATCTCTATTGTTATG
 TTTGAAACCTGTCAAAAATTTATGGTCAACCTGCAACATTTTCGTCGGTTTTTGAAGG
 GGCAGGCCCTCTTTTGTAGTACTTCTCCGTTTCGTTGTGATAGGCGTTCTTATAGGAA
 TTCTTGTGCTCTTCTGTGAAACACACTCACATAAGGCGCTATCCTCAAATTGAGAGT
 TGTATTGATCTTGTGATTGCTTATGAATCCTATTTTTCTCCAACGGTTGCCATATGTC
 CGGTATCGTCTCCTTGTATTGTCGGAATTACTTTAAACATTACGCCATTATATAACA
 TGTCAAGAAGATCACAGATCACCATTAAGTATATTTCCAACATTATGGCAAGATTATCA
 GAGAATTTATCTTTATCTATCTAGGTTTAGAATTTTACTGAAGTAGAAGTAGTCTA
 TAAGCCACTGCTAATTATGTGGCAGCTATTTCTATATGTGTGCTCGTTGGTGTGCTG

FIGURE 4 (continued)

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TGTTCCCATGTGCGCAATTGTTAACTGGATATATAGAGTAAAGACAATCAGATCTATG
AGCGGCATAACCGGAGAAAATATTTCTGTTCCCGATGAAATACCCCTACAATTACCAAAT
GATGACATTTTGGGCAGGTTTACGTGGTGTCTGTTGGTGTGCGCTTGGCGTTGGGAATTC
AAGGTGAGTATAAGTTCACTTTATTGGCAACGGTCCTTGTGTTGTTGTTTAAACAGTT
ATCATTTTGGGGGCACACTGCGAGGAATGTTAGAAGTTTAAATATTAAGACTGGTTG
CATAAGTGAAGAAGATACATCTGATGACGAGTTTGATATAGAGGCTCCAAGGCGATAA
ATTTATTGAACGGTAGTTCTATTGACACAGATTGGGCCCATATTCTGACAACAATCT
CCAGATATTTCAATTGACCAATTCGCGGTGAGCAGTAACAAGAATCTCCCAATAACAT
ATCCACAACCTGGTGGTAATACTTTTGGAGGCCCTTAATGAAACTGAGAATACTAGCCCTA
ACCCGGCAAGGTCTTCTATGGATAAGCGTAATTGAGAGATAAACTGGGAACAATCTTT
AATCCGACTCACAATGGTTTCAAAATTTGATGAACAGGTATTGAAGCCAGTATTCTT
GGACAACGTTTCTCCATCCTTACAAGATTGCGCTACGCAATCACCTGCAGATTCTCTT
CCCAAACCACTAG

SEQ ID NO 24: *Saccharomyces cerevisiae* protein

MLSKVLLNIAFKVLLTTAKRAVDPPDDDELFPSPDLPGSDDFIAGDPDVDLNPVTEBMF
SSWALFIMLLLLISALWSSYYLTQKRIRAVHETVLSIFYGMVIGLIIRMSPGHYIQDTV
TFNSSYFFNVLLPPIILNSGYELNQVNFNMLSLIFAIPTFTISAVVIGIILYIWMF
LGLESIDISFADAMSVGATLSATDPVTILSIFNAYKVDPKLYTIIIFGESLLNDAISIVM
FETCQKFHQQPATFSSVFEGAGLFLMTFSVLLIGVLIGILVALLKHTHIRRYPQIES
CLILLIAYESYFFSNGCHMSGIVSLLFCGITLKHYYNMSRRSQITIKYIFQLLARLS
ENFIFYLGLLELFEVELVYKPLLIIVAAISICVARWCAVFPFSLQFVNWIYRVKTIRSM
SGITGENISVPEIPIYNYQMMFFWAGLRGAVGVALALGIQGEYKFTLLATVLVVVLTIV
IIFGGTTAGMLEVLNIKTGCISEEDTSDDEFDIEAPRAINLNGSSIQTDLGPYSDNNS
PDISIDQFAVSSNKNLPNNISTTGGNTFGGLNETENTSPNPARSSMDKRNLRDKLGTIF
NSDSQWFQNFDEQVLKPVFLDNVSPSLQDSATQSPADFFSSQNH

SEQ ID NO 25: *Magnaporthe grisea*

ATGACTTTCGATATCGCCGGCAACCTCCTGGAGCTCACCAGGCGCGCTGCGAGGAACC
CGAACCTGGAGGAATGGCAGTTGGCCTTGCCCTGCGAGTGTTCGCCGTGATGGACTCC
AGGACCTCGTCAGCTTCGATTACCAAATCTTCTCAACCTCCTCCTCCACCCATCATC
CTCTCGTCCGGCTACGAGTTACATCAGGCCAACTCTTCCGGCACATCGGAACAATCT
CACGTTGCGATTTGCTGGCAGTTCCTGTCTGCAGTAGTCATCGGTGTTACTATGGC
TTTCACTCGCGTACCCCTCGAGGGGCTCACCATGAACTGGATCGATGCCATATCTGTT
GGCGCAACTTGTGAGTACCGATCCTGTCAACATCATAGCCATCTTCAACTCGTACAA
GGTGGACCCGAAGCTGTATACCATCATCTTTGGAGAGGCCATCTCAATGACGCTGTGG
CCATTGTCATCTTCGAGTCCGGCGCAAAAGTCCGCCAGGGGCTTGACCAAAGGCAGCGCT
GCTGGCATCTTACCTTCTTCTGGGGTTTCTGGATTTTCTTGAGGGACTTCTTCGGCAG
CTTGTTCATCGGGGCGCTTCTTGGCATCCTCACCAGCGCTCATGCTCAAGTACACGTACC
TCAGGAGGTTTCCCAAGCTGGAGAGCTGCTTGATTGTGCTTATGCTTACGCCACGTAC
TACTTTTCCAGGCCATACATGTCTGGAATTGTGTCACTGTTGTTCTGCGGAATCAC
ACTCAAACACTATGCATACTTCAACATGTGCGGAAGAACTCAGCTTACGACCAAGTACA

FIGURE 4 (continued)

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TGTTCCAGGTCTCGCACAACTGTCTGAGAACTTTATCTTTATTTACCTGGGTGTTTCC
 CTCTTTACGGACAAGGATCTCCAGTTCCAGCCCCCTCTCATATTGTCACTGTCTATGGC
 GGTGTGCGCAGCTCGCTGGGTTGCGGTATTCCCACCTCTCGTGGGCCATCAACTGGTTCC
 ACAAGTACCGGGCAGAAAGACGTGGCATCAAGAACGTGCCGAGGAGCTGCCGTACAAG
 TACCAAGGCATGCTGTTCTGGGCAGGGTTGCGTGGAGCGGTGCGTGTGCGCTGGCCGC
 GTTGTGACGGCCAAGGACCACCGTGCAATTCAAGGCGACCGTTCTGGTTGTGGTGGTGC
 TCACTGTTCATATATTGTTGGCACTACGGTCAACGTGCTTGAATCCTCGAGATCCGC
 ACGGGAGTGACGGATGAGATCGATTCTGACGATGAATTGACATCGAGGCAGTTGGGGG
 CTACTACAAGCGATCGGGTAACGGAATAGGTTATAGCCCGGCCGGCGCAATGCTGTTG
 TGCCCCTGACACACGTCCAGGTCCGAGACGTGACAGTAATGGCGCGCTCGGTGGAAGA
 GACCGCAGCGCTGGAGCTCAGGACATAGATCTCCCTTGAGTGGCGCAAGGCCTGGCAG
 TCTCGTCCGTACAGGTCACACCGCAAGAGCGGAAAGACTGGACCTCCTTGGCAACC
 CGGGCGGCTCGACAGACTCGGATGACTTTGGGAGCGACATTGACACGTGCGACCTGCCG
 CCACCGCCCTAGGAGACGATCCAGCCCAATGCCCTACGGCGACGAAGAGGCAGC
 TGGTTTGCCAGCGGGGGGAGCAGGACAAGGTCGAACACAGAGACGGGTGGCTTGTGG
 CCACGGCCGCGATCCGCCAGCTGTTTCAAGCAGGACCCCAACAGCCCTTTCAGGCAG
 CTGGACGAGGACTACATCAACCGAAGCTACTGCTCGATGGCGGTGCCGGCCGTGGAA
 CGGTGTTGGCGCTGGCGGATCGAGTTAG

SEQ ID NO 26: *Magnaporthe grisea* protein

MTFDIAGNLELRRAAEEPEPGMAVGLALRVFAVDGLQDLVSFDYQIFNLLLPPII
 LSSGYELHQANFFRHIGTILTFAGTFLSAVVIGVILWLYTRVPLEGLTMNWIDAI
 SVGATLSATDPVTIIAIFNSYKVDPKLYTIIIFGEAILNDAVAIVIIFESAQKSARGLT
 KGSAAGISTFFWGFWIFLRFDFGSLFIGALLGILTALMLKTYTLRRFPKLESLIVLIA
 YATY YFSQAIHMSGIVSLLFCGITLKHYYFNMSRRTQLTKYMFQVLAQLSENFI
 FTYLGVSLFTDKDLQFQPLLIIVTVMAVCAARWVAVFPLSWAINWFFHKYRAERRGI
 KNVPBELPYKYQGMFLWAGLRGAVGVALAALLTAKDHRAFKATVLVVVVLTVIIFG
 GTTVNVLEILEIR TGVTEIDSDDEFDIEAVGGYKRSNGIGYSPAGRNGVPLDTRP
 GRRRDSNGAVGGR DASGWSSGHRSPLSAARPGSLVRTGSTREAEERLDLLGNP
 GGSTDSDDFGSDIDTSDLP PPAPRRRSSPMPPTGDEEAAGLPAGGSRTSNTET
 GGLSATAAIRQLFSTEDPTALFRQLDEDIYKPKLLLDGGAGRGNGGGAGGSS

SEQ ID NO 27: Prolamine promoter

CTTCTACATCGGCTTAGGTGTAGCAACAGACTTTATTATTATTATTATTATTATT
 ATTATTTTACAAAAATATAAAATAGATCAGTCCCTCACCACAAGTAGAGCAAGTGGTG
 AGTTATTGTAAAGTTCTACAAAGCTAATTTAAAGTTATTGCATTAACTATTTCATAT
 TACAAACAAGAGTGTCAATGGAACAATGAAAACCATATGACATACTATAATTTGTTTT
 TATTATTGAAATTATATAATTCAAAGAGAATAAATCCACATAGCCGTAAAGTTCTACAT
 GTGTGTCATTACCAAAATATATATAGCTTACAAAACATGACAAGCTTAGTTGAAAAAT
 TGCAATCCTTATCACATTGACACATAAAGTGAGTGATGAGTCATAATATTATTTCTTT
 GCTACCCCATGTATATATATGATAGCCACAAAGTTACTTTGATGATGATATCAAGAAC
 ATTTTTAGGTGCACCTAACAGAATATCAAATAATATGACTCACTTAGATCATAATAGA

FIGURE 4 (continued)

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GCATCAAGTAAACTAACACTCTAAAGCAACCGATGGGAAAGCATCTATAAATAGACAA
GCACAATGAAAATCCTCATCATCTTCACCACAATTCAAATATTATAGTTGAAGCATAG
TAGTA

SEQ ID NO 28: Ubiquitin promoter without first intron

GATAATGAGCATTGCATGTCTAAGTTATAAAAAATTACCACATATTTTTTTTGTACAC
TTGTTTGAAGTGCAGTTTATCTATCTTTATACATATATTAACTTTACTCTACGAATA
ATATAATCTATAGTACTACAATAATATCAGTGTTTTAGAGAATCATATAAATGAACAGT
TAGACATGGTCTAAAGGACAATTGAGTATTTTGACAACAGGACTCTACAGTTTATCTT
TTTAGTGTGCATGTGTTCTCCTTTTTTTTGCAAATAGCTTCACCTATATAAATACTTCA
TCCATTTTATTAGTACATCCATTTAGGGTTTAGGGTTAATGGTTTATAGACTAATTT
TTTGTAGTACATCTATTTTATTCTATTTTAGCCTCTAAATTAAGAAAACATAAACTCTAT
TTTAGTTTTTTTATTTAATAATTTAGATATAAAATAGAATAAAATAAAGTGAATAAAAA
TTAAACAAATACCCCTTAAGAAATTAATAAACTAAGGAAACATTTTCTGTTCGAG
TAGATAATGCCAGCCTGTAAACGCCGTCGACGAGTCTAACGGACACCAACAGCGAAC
CAGCAGCGTCGCGTCGGGCCAAGCGAAGCAGACGGCACGGCATCTGTGCTGCTGCCTCT
GGACCCCTCTCGAGAGTTCCGCTCCACCGTTGGACTTGCTCCGCTGTGCGCATCCAGAA
ATTGCGTGGCGGAGCGGCAGACGTGAGCCGGCACGGCAGGCGGCTCCTCCTCCTCTCA
CGGCACGGCAGCTACGGGGGATTCTTTCCACCGCTCCTTCGCTTTCCCTTCCTCGCC
CGCCGTAATAAATAGACACCCCTCCACACCTCTTTCCCAACCTCGTGTGTTTCGGA
GCGCACACACACAACAGATCTCCCCAAATCCACCGTCGGCACCTCCGCTTC

SEQ ID NO 29: prm3122 (sense, AttB1 site in *italico*)

GGGGACAAGTTTGTACAAAAAAGCAGGCTTCACAATGGGGATGGAGGTGG

SEQ ID NO 30: prm3123 (reverse, complementary, AttB2 site
in *italico*)

GGGGACCACITTTGTACAAGAAAGCTGGGTGCACGTTCATCTTCCTCC

FIGURE 4 (continued)

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